

Abstract of the Disclosure

The present invention pertains to vectors for regulating gene expression having at least one gene expressing cassette and at least one gene suppressing cassette, wherein the gene expression cassette encodes a polypeptide of interest, and wherein the gene suppressing cassette
5 encodes a short interfering RNA (siRNA) molecule that reduces expression of a target gene by RNA interference. The present invention further includes vectors that contain suppressor cassettes in conjunction with cassettes upregulating gene expression regulated by either a constitutive promoter, such as a general CMV promoter, or a tissue specific promoter. The present invention further includes vectors that contain Dengue virus gene suppression cassettes.

10 The present invention further includes pharmaceutical compositions containing such vectors, methods of modulating the expression of genes in a host using such vectors, and method of producing such vectors.